

PERCEIVED EFFECTS OF ICT USAGE ON JOB PERFORMANCE OF LECTURERS IN AGRICULTURAL SCIENCES IN NORTHWEST NIGERIA

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Abstract

The main objective of this study was to determine the perception of Agriculture lecturers in universities in North-western Nigeria on the effect of ICT usage on their Job performance. A Purposive sampling technique was used to select five out of eight public Universities that offer Agricultural Science as a programme of study in the area. A Simple random sampling procedure was used to select 287 out of 367 Agriculture lecturers while a Questionnaire was used to collect the data for the study. The data was analyzed using descriptive and inferential statistics. The results revealed that a good proportion (40.77 %) of the lecturers fall within the age range of 41–50 years, 89.90% were male. The result revealed that 53.31 % of the lecturers were holders of MSc. Degree, and 28.22% possessed Doctorate degree. A greater proportion indicated above average perceived effect of ICT usage on Job performance (83.62 %). The results from the Pearson correlation analysis revealed a weak positive correlation between perceived effects of ICT usage on Job Performance and ICTs adoption ($r = 0.194$, $P < 0.01$). Similarly, the lecturers reported a lack of technical support, unstable power supply, affordability, lack of Computer spare parts, and low level of ICT readiness, poor economic conditions, and mismanagement of ICTs facilities as some of the constraints to ICTs adoption. The study recommended that Universities should provide more ICT facilities, support to lecturers for further studies, technical support to their staff, and support to ICT units to be organizing on the job training on ICT for all interested members of staff, encourage the lecturers to make use of the provided e-learning facilities, develop and maintained their complementary sources of power.

Key words: ICT, effect, perception, performance

Introduction

Information and Communication Technology (ICT) is increasingly becoming more widely spread throughout university education worldwide. This is in line with UNESCO policy paper for change and development in higher education which urges educational institutions to make greater use of the advantages offered by the advancement of communication technology to improve the provision and quality of their education (Chitanana *et al*, 2008).

Yves (2006) cited in Akinagbe and Baiyeri (2011) observed that it is difficult, may be even impossible to imagine future learning environments that are not supported, in one way or another, by information and communication technologies (ICTs). They further stated that looking at the current widespread diffusion and use of ICT in modern societies, especially by the young, it should be clear that ICT will affect the complete learning process today and in the future,

thus their use in education by staff (academic and non-academic) and students are becoming a necessity. The above argument has made it imperative that 'university lecturers' not only need to use ICTs (computer literacy) but they need to become comfortable with using ICTs. This is to ensure that they participate fully in the life of contemporary University system and to accomplish their tasks. Zhaho *et al*. (2001) also pointed out that the successful use of ICT in research, teaching, and learning will depend largely on the attitude of teachers and their willingness to embrace the technology. Therefore, this study attempted to explore the perception of the lecturers on the perceived effect of ICT usage on their job performance.

Methodology

The study was conducted in five Nigerian Universities located in four North-Western states of Nigeria,

namely Ahmadu Bello University, Zaria, Kaduna State, Bayero University, Kano, , Usmanu Danfodiyo University, Sokoto, Kebbi State University of Science and Technology, Alero and Kano State University of Science and Technology (Table 1).

The main objective of the study was to determine the perception of Agriculture lecturers in universities in North-western Nigeria on the effect of ICT usage on their perceived job performance. Five of the eight public universities that offer Agriculture were purposively selected. List of lecturers was used as the sampling frame for the study where Ninety percent (90%) of the lecturers of the faculty of agriculture of the selected universities were selected but the number was rounded up to the nearest whole number.

Sixty (60) lecturers were selected from Bayero University Kano, but 52 questionnaire were returned, One hundred and thirty-seven (137) from Ahmadu Bello University Zaria but 122 were returned, twenty-six (26) from Kebbi State University of technology Aleiro but 22 were returned, Thirty-Nine (39) lecturers were selected from Kano State University of Technology, Wudil but only 28 questionnaires were returned and 71 from Usmanu Danfodiyo University Sokoto but 63 questionnaires were returned. A total of three hundred and thirty-three (333) lecturers were selected for the study but a total of 287 questionnaires were returned and therefore, were used as the sample for the study (Table 1).

Table 1: Universities' State of Location, Population and sample size of Agriculture Lectures as at 12/04/2012 (N =287)

Universities	State	Latitude	Longitude	Population	Sample (90 %)	Questionnaire returned
Bayero University Kano	Kano	10°33'N-12°03'N	7° 34'E- 8° 32'E	66	59.4(60)	52
Ahmadu Bello University, Zaria	Kaduna	9° 10'N- 11° 30'N	6° 10'E- 9° 00'E	152	136.8(137)	122
Kebbi State Univ. of Sci.& Tech Aleiro	Kebbi	10° 05'N -3° 27'N	3° 35'E - 6° 03'E	28	25.2 (26)	22
Kano State Univ .of Tech, Wudil	Kano	10°33'N-12°03'N	7° 34'E- ° 32'E	43	38.2(39)	28
Usmanu Danfodiyo University, Sokoto	Sokoto	11° 30'N -3° 50'N	4° 00'E - 6° 04'E	78	70.2 (71)	63

Source: Field survey.

The primary data were collected using questionnaire. The data collected include information on feelings/perception about the effect of ICTs usage on their job performance and constraints to ICT adoption. The secondary information was obtained from textbooks, journals, seminar papers, past projects and theses and the internet.

Data collected were analyzed using descriptive statistics. The Objectives of the study were achieved by the use of descriptive statistics and behaviorally anchored rating scale (self-assessment).

In the self-assessment approach, lecturers were requested to indicate their preferences to some questions on five-point attitudinal statements. They could either strongly agree (SA) which is scored five points, agree (A) which is scored four, undecided (U) with a score of three, disagree (D) which is scored two points or strongly disagree (SD), with a score of one point. The scores for the performance self-assessment of the lecturers were summarized in Figure 1.

The maximum obtainable scores were 30 derived from 6 questionnaire items with five points as the

obtainable score for each item thus (5x6=30).Using forced distribution method, respondents were grouped into the poor effects of ICT use on job performance (10-14 scores), below average effects on job performance (15-19 scores), average effects on job performance (20-24 scores) and above average effects on job performance categories (25 and above). This categorization was adopted from Luthans, (1989).

Presentation of Results and Discussion of findings

Socioeconomic Characteristics of the respondents

The result in Table 2 show that 40.77% of the lecturers fall within the age range of 41 – 50 years while 38.33% fall within the range of 31 – 40 years of age. This is in line with the findings of Akinagbe and Baiyeri (2011) who observed that about half of the lecturers of Faculty of Agriculture in the University of Nigeria Nsukka were at the middle age. Most of the Lecturers (89.90%) were males. The case of male dominance among lectures has similarly been documented under Saudi higher education Amany and Areej (2003) The dominance of male lecturers observed could be attributed to the pattern of enrollment of male and female candidates into the

Faculties of Agriculture of many Universities where male candidates were usually the majority.

The implication of this finding is that there is need for new strategies such as giving special considerations or waiver in terms of admission requirements (JAMB, Post-UTME) and automatic employment for female candidates interested in teaching agriculture. Also, 88.15% of the lecturers were married. The family responsibilities might reduce their ability to purchase a computer and other ICT devices as well as time devoted to learning and using ICT facilities. Over half (53.31%) of the lecturers possessed Masters Degrees while 28.22% possessed Doctorate Degrees. This trend slightly differs from what Akinnagbe and Baiyeri (2011) observed 48.5% of the lecturers of Faculty of Agriculture in University of Nigeria Nsukka as Ph.D. holders. The differences can possibly be attributed to fact that the University of Nigeria Nsukka is one of the older Universities in Nigeria. The results show that Graduate Assistant and Lecturer II constituted 21.25% and 21.60% respectively while

professors constituted 9.06% of the entire population under study. Amany and Areej (2003) have also observed a similar trend among lecturers in Saudi Higher education with Instructors/Lecturers constituting 40.1% while professors constituted only 13.1%.

In terms of working experiences, 36.59% of the lecturers had a work experience of 1–5 years while 6.97% had more than 20 years' experience. The implication of this finding is that many lecturers are likely leaving the service (brain drain) before their retirement age probably to obtain better opportunities in newly established Universities.

Also, 42.86 % and 20.55% of the lecturers were having 2–5 and 10 and above years experiences of using ICTs respectively. Yasemin *et al* (2008) also reported similar results with (33.1%) of Lecturers in Turkey Higher education having 8-11 years, while those with 11 and above years constituted (29.13%) of the Lecturers. The number of years of using ICT is expected to boost their job performance.

Table 2: Socioeconomic Characteristics of the respondents

Variable	Frequency	Percentage
Age		
21-30	32	11.14
31-40	110	38.33
41-50	117	40.77
>50	28	9.76
Marital status		
Married	253	88.15
Single	27	6.41
Widow	7	2.44
Educational Qualification		
Bachelor's Degree		
Master's Degree	53	18.87
Doctorate degree	153	53.31
Rank of lecturers	61	28.22
Graduate Assistant (GA)		
Assistant Lecturer (AL)	61	21.25
Lecturer II (LII)	54	18.82
Lecturer I (LI)	62	21.60
Senior Lecturer (SL)	36	12.54
Reader	28	9.76
Professor	20	6.97
Working Experiences	26	9.06
1 -5		16.59
6 -10	105	
11-15	68	23.69
16-20	54	18.82
>20	40	13.93
ICT Experience (Years)	20	6.97
2 -5		
6-9	123	42.86
10 and above	105	36.59
	59	20.55

Perceived effects of ICT use on Job Performance of Agriculture Lecturers

The results in Table 3 revealed that 93.38% of the lecturers agreed that “the use of internet enables them to improve their lecture notes and that improves their job performance”. A majority of the lecturers (99.30%) also agreed that “the use of ICTs makes it easier for them to put maximum efforts on their job and this leads to improvement in the job performance ‘while 96.17% agreed “that the use of ICTs provides them with the opportunities for personal development and this makes the productivity on the job very high”’.

The results show that 95.12% of the lecturers agreed that “the use of ICT improves their initiatives and this improves their job performance”. Furthermore, 89.55% disagree that “the use of ICTs does not improve their job performance while 71.29% disagree that use of ICTs does not in any way affect the quality of their job” (Table 3)

The above findings show that the emergence of ICT really helps lecturers in enriching their lecture notes and making their work easy and up- to- date and this can impact positively on teaching and research within the University system.

Table 3: Lecturers’ Distribution based on perceived effect of ICT use on job performance

N	Attitudinal Statement	Agree		Disagree	
		Frequency	Percentage	Frequency	percentage
1	Use of Internet enables me to improve my Lecture notes and that improves my job performance	268	93.38	19	6.62
2	Use of ICTs makes it easier for me to put maximum effort on my job and this leads to improvement in my Job performance	285	99.30	02	0.70
3	Use of ICTs provides me with opportunities for personal development and this makes my productivity in the job very high.	276	96.17	11	3.83
4	Use of ICTs improves my initiatives while carrying out my assignments and this improves my job performance.	273	95.12	14	4.88
5	Use of ICTs does not improve my job performance	10	10.45	257	89.55
6	Use of ICTs does not in any way affect my Job performance	025	8.71	262	91.29

Categorization of lecturers based on perceived effect s of ICT use on their Job Performance

The results in Figure I shows that 83.67% of the lecturers indicated that the perceived effect of ICT usage on job performance was above average while few of them (14.63% and 1.74%) indicated perceived effect of ICT use on job performance respectively were average and below average respectively. It implies that use of ICTs has a very high effect on the

way the lecturers perform their teaching and research activities. This finding revealed a similar trend of perceived effect of ICT use on the job performance of lecturers as pointed out by Yusuf (2005) who reported that ICTs provide a variety of tools to support and facilitate teacher’s professional competence. ICTs transform teaching and helps teachers to be more efficient and effective, thereby increasing their interests in teaching.

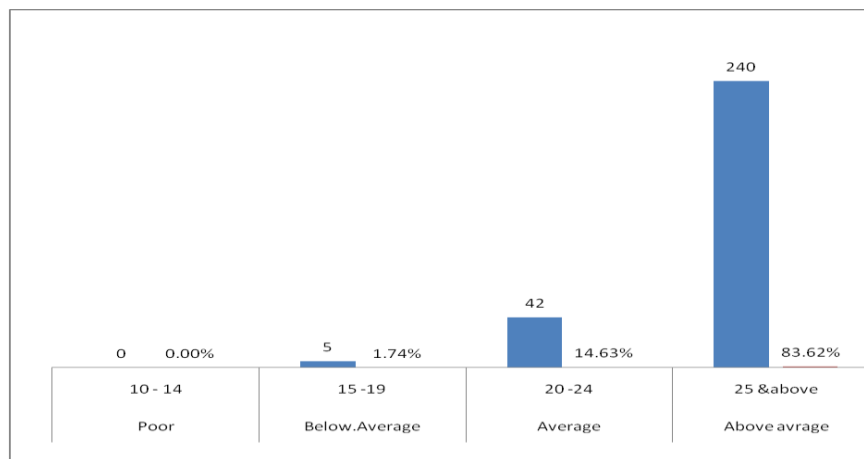


Figure 1: categorization of lecturers based on perceived effects of ICT use on Job Performance

Conclusion

It could be concluded that there are more male lecturers in the faculties of Agricultural Sciences in the Northwest Universities in Nigeria. Most of the lecturers had Master's and PhD certificates respectively. The majority (83.63 %) of the lecturers indicated above average perceived effect of ICT usage on Job Performance. Meaning that ICTs provide a variety of tools to support and facilitate teacher's professional competence, helps teachers to be more efficient and effective, thereby increasing their interests in teaching.

Recommendations

(i) Universities should make more effort on their plan for integrating ICT in the school system by providing additional modern ICT facilities such as trace board in all their Lecture venues so as to encourage the use of modern teaching methods in the university system.

(ii) Universities should make effort on their staff development plan to encourage the 53.31% M. Sc holders to pursue Doctorate Degrees.

The Universities should support their ICT Directorates to organize on the job training to assist lecturers in improving their skill proficiency in using computer applications.

References

- Akinnagbe, O. M., And Baiyeri, K. P. (2011) Training needs analysis of lecturers for information and communication technology (ICT) skills' enhancement in Faculty of Agriculture, University of Nigeria, Nsukka. *African Journal of agricultural research* 6(32) .pp.6635-6646: doi 105897/AJAR11,1233
- Armany, A, and Areej A. (2003) Internet Usage by Faculty in Saudi Higher Education: *Information Technology for Development* 10 (2003) 57–69. IOS Press Likert (1931) https://en.wikipedia.org/wiki/Rensis_LikertWikipedia
- Luthans, F. (1989) Organisation Behavior. Available at:<http://en.wikipedia.org/wikagricultural> extension
- Yasemin, U, K., P. Aşkar, & T. Baş.(2008). A Structural Equation Model for ICT Usage In Higher Education. *Educational Technology & Society*, 11 (2), 262-273.
- Yusuf, M. O. (2005). Integrating ICTs in Nigerian tertiary education. The African Symposium: An *Online Journal of African Educational Research Networks*, 5 (2), 43-50.
- Zhao, Y. and Frank, K.A (2003). Factors Affecting Technology Uses in Schools: An Ecological Perspective [Electronic Version]. *American Educational Research Journal*, 40(4), 807-840.